

Stewardship Notes

Indiana Division of Forestry



Riparian Zone Management

Riparian zones are the areas that border intermittent or permanent streams and rivers. They are the transition between the terrestrial environment and the aquatic environment. The vegetation growing in riparian areas can vary from mature forest to grass sod. Well vegetated riparian zones are important for many reasons.

Often, the most productive soils are found along major waterways. Vegetation in the riparian zone acts as the "last line of defense" in reducing soil and nutrient loss by slowing surface runoff before it reaches the stream. When runoff is slowed, erosion is reduced and the quality of the water is maintained. One of the major sources of sedimentation and nutrient pollution of streams and rivers is from non-point areas, such as agricultural fields, pastures, and roadways. A well vegetated riparian zone can act as a buffer and reduce this form of pollution.

Riparian areas are often subject to flooding. Trees and shrubs growing along the banks help moderate floods by slowing the flow of the water. Less damage is done downstream when vegetation absorbs some of the water's energy.

Valuable tree species are supported in riparian areas and associated bottomlands. Well stocked stands of trees growing on these rich sites can provide timber and other forest products.



Riparian forests are also important for many species of wildlife. They provide critical habitat for many species of birds, amphibians, and for all species of bats found in Indiana. Wooded riparian areas also act as corridors for many species of wildlife. Natural vegetation along waterways connects many natural areas that would otherwise be isolated. These corridors are essential for the movement of animals. The successful reintroduction of the wild turkey throughout much of Indiana is due partly to the turkeys' use

of these natural corridors throughout the landscape. Riparian forests also shade the

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streams and help provide good spawning sites for many species of fish and other aquatic animals.

In riparian areas, any form of permanent vegetative cover is better than none. Livestock should also be excluded from these areas. To establish a good riparian buffer strip, it is best to plant trees and shrubs. The planting should extend inland for at least 100 feet. Trees should be planted closest to the stream bank; shrubs can be planted further inland. Consult with a forester for help in determining the proper species and spacing.

Good management of riparian zones enhances water quality, reduces flood damage downstream, helps wildlife, and provides valuable forest resources.